

Specification Requirements	Check If Meets or Exceeds Spec	Fully Describe Offered Alternatives To Requirements
<u>Category A</u>		
<i>Note: Both the 5-6 and 10-12 cu yd body shall be built utilizing the same specifications. The exceptions shall be those required for the successful operation of each body size.</i>		
<i>Note: Successful vendor shall pick up cab and chassis from the chassis vendor location for the installation of the various dump bodies.</i>		
1. <u>Dimensions:</u>		
a. Water level capacity shall be 5 cubic yards for the 5-6 yard body and 10 cubic yard's for the 10-12 yard body, without sideboards.		
<i>Note: The CA for the 5-6 yd trucks shall be 96 inches and 120 inches for the 10-12 yd body.</i>		
b. Shall have a water level of 6 and 12 cubic yards with the side boards installed		
c. Shall have side pockets for sideboards.		
d. The body shall be delivered with the lumber sideboards installed.		
e. Side height of the 10-12 cu yd body shall be 36 inches at the front and 28 inches at the rear.		
f. The front bulkhead shall be tilt-able to facilitate front dumping on both the 5-6 and 10-12 cu. yd. bodies.		
<i>Note: A sliding body is unacceptable.</i>		
g. The sides of the body shall be equipped with one strip of 3M reflective tapes Part# 980-52ES diamond grade. The tape shall be positioned in the recessed areas along the side of the body and running full length.		
h. The tailgate shall be equipped with the identical 3 M tape. The tape shall be placed along the top and bottom braces and full width.		

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2. <u>Body Construction:</u>		
a. The sides, front, and tailgate shall be constructed of 10-gauge steel.		
b. The floor shall be 3/16-inch T-1 steel plate with a 90,000-psi yield.		
<i>Note: Cover plate of T-1 over Cor-Ten is not acceptable.</i>		
c. All welds on the body both inside and outside shall be continuous wire weld.		
d. Body shall be of a streamlined design with sloped surfaces on top and lower side panel rails.		
e. A front mud flap-mounting bracket to include the mud flap shall be welded to the dump body in front of the drive axle.		
f. The trucks shall be delivered with a mid-ship mounted full width rubber flap. The flap shall extend to within 3 inches of the ground. The attachment point shall be to the frame rails of the truck.		
g. A walk rail shall be installed on each side of body constructed of 5/8-inch steel rebar stock with supports.		
h. The walk rail shall be 4 inches above the bottom of the bed.		
i. A ladder shall be installed on the right front side of the body.		
j. The ladder shall swing up and latch to a travel position and swing down to a stop position for access to dump body.		
<i>Note: ladder shall not interfere with installation and removal of the front dump pivot pin.</i>		
k. The ladder shall be equipped with four ladder rungs		
l. A grab handle shall be installed near the ladder to aid in mounting.		

3. Bottom and Top Hinged Tailgate with Lock:

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a. The tailgate shall be fabricated from 10-gauge high strength alloy steel, min. 50,000-psi yield.	_____	_____
b. Shall be flush with the bed of the body when in the horizontal position	_____	_____
c. Shall be braced with horizontal bracing and sloped 45 degrees.	_____	_____
d. Shall have a rounded top for self-cleaning.	_____	_____
e. Shall have a 3 inch folding "D" ring welded to the top center, for lifting the tailgate off the truck.	_____	_____
f. Shall have upper and lower slotted chain keepers.	_____	_____
g. A set of 3/8-inch high-test chain shall be provided and installed, to allow for support of the tailgate in the horizontal position.	_____	_____
h. Upper hinges shall be flame cut from 1 inch, T1 steel plate	_____	_____
i. Upper hinges shall be offset 5 inches, with 1-1/4 inch top pins and 1-1/4 inch bottom pins.	_____	_____
j. The locking hooks and lower hinges shall be flame cut from 5/8 inch steel plate.	_____	_____
<i>Note: Shall be a positive locking device.</i>	_____	_____
k. The lock shall extend to the lower support of the tailgate pins, when the tailgate is in the horizontal position.	_____	_____
l. The tailgate lock cross shaft, shall have grease fittings at the bearing points.	_____	_____
m. Shall have adjustable stops on each side of the body for over center adjustment.	_____	_____
n. Tailgate latch shall be a straight air operated latch, utilizing an air pilot valve and an air release, spring lock cylinder.	_____	_____
o. The cylinder shall be mounted in a position that will allow adjustment to ensure over center locking of the tailgate latch	_____	_____
p. Shall have a WSDOT provided air toggle switch and shall be mounted on the cab control console	_____	_____

4. Hoist:

- a. **Tandem axle trucks**: Shall have a twin arm

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hoist, under-body type.		
b. Single axle Trucks Hoist shall be an under body type NTEA V single cylinder.		
b. All hinge points of the scissors mechanism shall be double the thickness of the base metal. Shall have stops to prevent any over center conditions in the scissors mechanism.		
d. Shall have power down system to include pressure relief system.		
e. Hoist frame shall consist of 6 inch x 3 inches x 1/4 inch rectangular tubing.		
f. Tipping frame longitudinal shall be 10 inch x 3 inches x 1/4 inch rectangular tubing.		
g. Shall have a push; pull pin type of mechanism to select front or rear dump modes. The mechanism shall be aligned properly and greasable.		
h. The WSDOT supplied hoist bed travel-limiting switch shall be located in the cab and on the driver's side floor.		
5. Conveyor:		
a. Unit shall have double chain type conveyor with crossbars 1-1/4 inch x 1/4 inch on 9 inch spacing.		
b. The overall chain width shall be 12 inches.		
c. The chain shall have a 2.25-inch pitch with a 21,000 lb. tensile strength per strand.		
d. Shall be equipped with 7/16 heat-treated pins.		
e. Drive sprockets and Idler sprockets shall be heat treated		
f. The conveyor shall be installed at the front of the body floor and level with the left front outlet of the spinner chute.		
g. The conveyor shall be driven by a hydraulic motor attached to a gear reduction box.		
h. Shall have a chain coupling between the gear reduction box and the sprocket drive shaft.		
i. The complete unit shall be fabricated to allow removal of the gear reduction unit or conveyor		

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drive shaft independent of each other.		
Note: Bidder shall provide drawings of proposed unit to WSDOT.		
j. Conveyor shafts shall be supported by sealed, self-aligning bearings.		
k. The tension of the conveyor chain shall be adjustable to a 4-inch adjustment range.		
l. Shall be equipped with rollers to support the chain on each end of the chain return chute. The rollers shall have lubricated bearings.		
m. A seven-inch opening drop chute shall be installed under the chain on the right side of body.		
n. The left front chute gate shall have an outside of the bed adjustment.		
o. The gate control lever shall be mounted on the left front of body with a spring type, position lock.		
p. Shall have an access door for the gate and chain located on left front lower part of body.		
6. <u>Shield:</u>		
a. A shield made of T-1 steel shall be supplied to cover the conveyor.		
b. Stowage for the conveyor chain shield shall be on the front and outside, of the dump body.		
Note: The operator shall be able to pull the shield out of its holder from the inside of the body.		
7. <u>Spinner:</u>		
a. The spinner assembly shall be mounted on the left-front side of the body.		
b. The spinner shall be driven by a cab controlled		

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hydraulic motor.		
c. An adjustable chute shall be provided to allow the material to drop on the spinner at different locations to control the spread pattern.		
d. The spinner shall be equipped with quick disconnect hydraulic hose fittings.		
<i>Note: Vendor shall provide option pricing for a deflector shield to be installed on the spinner. This will have the ability to deflect the sand in a downward angle. The shield will enable the operator to continue sanding when encountering on coming traffic.</i>		
8. <u>Lighting:</u>		
a. All lights and wiring shall be installed to FMVSS specifications and standards.		
b. All lights shall meet all applicable local, state, and federal laws and/or standards in-force at time of installation.		
c. All lights, wiring and connections shall be weather tight utilizing weather pack connectors.		
d. Lighting and wiring requirements:		
1. Shall have one body mounted Truck-Lite Series 50 weather proof, surface mount junction box.		
2. The stop, turn and tail lamps shall be Truck-Lite Super 40, 4-inch diameter, grommet mounted, red, sealed lamps.		
3. Shall have two stop, turn, tail lamps on each rear upper corner post of the body.		
4. Each rear corner shall be equipped with one additional light pocket and an alternating amber flashing light.		
5. Shall have one Truck-Lite Super 10, 2-1/2 inch diameter, grommet mounted; sealed red clearance lamp mounted 45 degrees in each of the lower rear dump body corner posts. Lights shall be visible from the sides and rear		

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of vehicle.		
6. Body mounted tail and sanding lights are to be flush mounted and protected by a 3/4-inch long, 1/4-inch thick wall tubing welded to the body.		
7. If any lights protrude beyond the outer edges of the corner posts, the forward surface of the protection ring will be shaped to prevent chains from being hooked while dumping.		
8. No chains or portion of the tailgate shall cover any portion of the lights or protection rings.		
9. Shall have an identification lamp assembly consisting of a mounting bracket with three Truck-Lite Super 10, 2-1/2 inch diameter red sealed lamps on 6-inch centers.		
10. All lights shall use a white wire ground system, to the chassis ground terminal.		
<i>Note: No body components shall be used for grounding purposes.</i>		
9. <u>Dump Body Prop:</u>		
a. A dump body prop to lock the bed in a raised position, (both directions), shall be installed to meet OSHA and WISHA standards		
b. Shall be a double support type and interconnected to allow both props to be raised from either side.		
<i>Note: All hydraulic components shall be supplied by WSDOT</i>		
10. <u>Hydraulic Pump:</u>		
a. Pump assembly shall be mounted to drive from the front crankshaft of the chassis		
b. Pump driveline shall be installed per driveline manufacture's specification.		

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11. <u>Hydraulic Pump:</u>		
a. Shall be pedestal mounted between the seats and convenient to the operator.		
<i>Note: The console shall be mounted as close to the truck dash as possible without hindering the operation of the truck.</i>		
<i>Note: All console components and hydraulic components associated with this purchase shall be mounted in the identical position on all equipment provided by WSDOT.</i>		
b. There shall be sufficient slack in electrical wires and hydraulic lines running into console for ease of lid removal and maintenance.		
c. Power source to the console shall be wired through a constant duty solenoid that is controlled by the ignition switch.		
d. Wiring diagrams shall be furnished with each unit.		
<i>Note: The bidder shall utilize and wire the in dash low hydraulic oil light located on the passenger side of the dash.</i>		
12. <u>First Work Section:</u>		
a. Shall be for the sander control.		
b. The valve shall be air controlled and vented back to the truck cab.		
c. Shall have a console mounted controller and indicator light. "A" port shall be plumbed directly to the sander flow control.		
d. Return flow from the sander motors and sander control by-pass port shall be through a 1-inch in-line check valve to the "B" port.		
13. <u>Second Section:</u>		
Shall be used for plow angle reverse.		
14. <u>Third Section:</u>		
a. The "A" port " shall be plow power down.		

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b. The "B" port shall be the "plow power up.		
15. <u>Fourth Section:</u>		
a. Shall be for the under-body hoist.		
b. The "A" port shall be hoist "power down".		
c. The "B" port shall be hoist power up.		
16. <u>Valve Bank Box:</u>		
a. Valve bank box shall be supplied by WSDOT.		
b. The valve bank shall be mounted on the frame rail in a location determined at time of installation.		
<i>Note: Box mounting shall not restrict lid removal.</i>		
c. All airlines shall be numeric coded on each end and listed on a schematic showing the mounting.		
d. The valve bank shall be installed to allow the air actuators to be towards the front of the box.		
17. <u>Hydraulic Hoses:</u>		
<i>Note: The WSDOT designed hydraulic system shall be installed as per attached drawing.</i>		
a. All hydraulic fittings and hoses shall be Weather head components.		
b. Pump suction line shall be 2 inches from pump to		

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reservoir.		
c. Pump pressure line shall be 1 inch.		
d. Hoist line shall be 1 inch.		
e. Vendor shall supply hydraulic hoses, and fittings.		
f. All hoses and fittings shall be rated at 1.5 times the required working pressure.		
g. Sander pressure line shall be 3/4 inch.		
h. Sander motor pressure line shall be 1/2 inch.		
i. Sander return line shall be 3/4 inch.		
j. Plow pressure lines shall be 1/2 inch.		
k. Sander lines shall be plumbed to the sander with 1/2-inch quick disconnects.		
l. Plow lines shall be plumbed to the front of the truck with 1/2-in. quick disconnects		
m. All lines shall be flushed inside with solvent prior to installation.		
<i>Note: The installer shall be held responsible for any malfunctions in the system due to contamination or poor workmanship.</i>		
<i>Note: Restrictions that cause pressure drops or back pressure are not acceptable.</i>		
n. All airlines for the operation of the valve bank and tailgate shall be 1/4-inch OD polyethylene DOT approved air brake lines.		
o. Air line fittings shall be brass push-in type.		
p. An 85 lb. air protection valve shall be installed at the chassis air reservoir where the air control valve feed-line connects.		
q. All lines routed in locations where possible chaffing and wear may occur, shall have a protective covering and be adequately supported throughout the system.		
r. No pump fittings or oil lines shall be routed either over or under the frame rails forward of the radiator.		
<i>Note: All line installation shall conform to</i>		

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<i>industry standards as relating to bending radius.</i>		
s. No lines shall be attached to, or bundled with, electrical cables or wires.		
t. Hydraulic line, non-metallic mounting blocks shall be utilized when attaching the lines to the truck frame.		
<i>Note: Plastic tie wraps shall not be used to support the lines.</i>		
<i>Note: All hydraulic lines installed on any WSDOT provided chassis should not sag below the frame rails.</i>		
18. <u>Oil Reservoir:</u>		
a. Shall be supplied by WSDOT.		
b. Filter shall be mounted in the return to tank line.		
c. Shall have a ball valve between the filter and the tank.		
d. Shall have the capability to change the filter without draining the tank.		
e. A ball valve shall be installed directly on the suction outlet to isolate the oil tank while working on the hydraulic system.		
f. The return line to tank shall be 1 inch into the filter housing. From the filter housing to the ball valve shall be 1 1/4 inch line. No elbows shall be utilized at this point.		
g. All hydraulic oil shall be pre-filtered into the oil reservoir through a 10-micron filtration unit.		
19. <u>Painting:</u>		
a. All welding scale, grease, etc. shall be removed and all roughness and sharp corners shall be ground off.		
b. Body, hoist and mounting frame shall be prime coated with a minimum of 2 mils dry automotive quality two-part epoxy primer.		
c. Two coats of Dupont 7744D (paint to match		

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cab and chassis), 3 mils dry, shall be applied to the complete outside of the dump body.		
20. <u>Trailer Towing:</u>		
a. Pintle hook for the single axle trucks shall have a 30,000 lb. capacity solid mount.		
b. Pintle Hook for the tandem axle trucks shall be a Holland Model PH300 with air-operated plunger. Shall have the ability to haul 30 tons safely.		
c. All mounting hardware shall be Grade 8.		
d. Shall have two installation heights of 26 and 30 inches from the ground, to the draw bar eye rest with no load in the dump body		
e. Shall have adequate bracing and safety chain d-rings to ensure that a rated capacity of 30 tons can be towed.		
f. Glad hands and covers shall be installed in brackets utilizing bulkhead fittings. They shall be positioned at a 45-degree downward angle.		
g. The pintle mounting plate location shall be determined at the time of construction.		
h. The chassis vendor supplied 7-pole trailer connection shall be installed above the pintle hook and shall not interfere with the operation of the pintle hook.		
21. <u>Prototype Inspection & Performance Demo:</u>		
a. The supplier shall build the first single axle and tandem axle units of this contract as a prototype; which will comply with all specifications prior to the building of any subsequent units.		
b. The specification compliance inspection shall be accomplished by a WSDOT committee utilizing only this specification.		
c. The WSDOT Equipment Administration Office		

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shall be notified when the first prototype is ready for inspection. (360) 705-7884.		
<u>Category B:</u>		
<u>1. Dimensions:</u>		
a. Dump body shall be a contractor type, with a sloped or vertical tailgate.		
b. Bodies shall be available in the following water level capacities, with 9 inch raised ends for 3-inch thick X 9 inch high lumber.		
<i>Note: Vendor shall provide the lumber running the full length of the body.</i>		
c. 5-6 cu. yd. Body, inside dimensions with a 96" CA.		
1. Forward inside width, 82 inches.		
2. Rear inside width, 84 inches.		
d. 10-12 cu. yd. Body, inside dimensions with 120" CA.		
1. Forward inside width, 82 inches.		
2. Rear inside width, 84 inches.		
e. The sides of the body shall be equipped with one strip of 3M reflective tapes Part# 980-52ES diamond grade. The tape shall be positioned in the top recessed area along the side of the body and running full length.		
<i>Note: The tape shall not be placed on the body side support ribs.</i>		
f. The tailgate shall be equipped with the identical 3M tape. The tape shall be placed along the top and bottom braces and shall run full width.		
<u>2. Body Construction:</u>		
a. The floor shall be coved for easy release of material.		
b. The floor of the bed shall be welded full length to the inner sidewall.		

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c. The body shall be double sidewall construction. Outer wall shall have an integral 4 inch x 4 inch boxed top rail, a trapezoid style horizontal side brace, and a sloped running board, formed from one piece of 10 gauge material		
d. The inner wall shall be one piece of 10-gauge material and welded to the outer wall full length. Shall have two rows of circular welds on 12-inch centers.		
e. The doghouse shall be a rounded one-piece construction with access covers to all service points.		
<i>Note: Shall be able to bleed the cylinder and grease the upper pin from ground level.</i>		
f. The headboard and doghouse shall be fabricated from 3/16 inch 50,000 psi steel and shall have continuous wire welds.		
g. The headboard shall have two cross bracing's on each side of the doghouse.		
h. The longitudinal shall be formed from 3/16 inch 50,000 psi. steel plate.		
i. The longitudinal shall be a trapezoidal style with a 4-inch base, 10 inches high, a 10-inch top with 1-inch flanges on each side.		
j. The longitudinal shall be end capped with bulkheads		
k. Complete unit shall be welded to the floor with continuous wire welds.		
l. Hinges shall be manufactured from Shelby Tubing, 5 inches long with 5 inch x 6-inch pads for the longitudinal welds. Pads shall be fully gusseted to the tubing.		
m. Shall have 2 inch hardened pins with a flange welded on one side. This will enable the pin to be bolted to the hinge eyes and prevent pin rotation.		
n. Hinge eyes shall be flame cut from 1 inch, 50,000 psi. steel plate. Hinge eyes are welded to a 4 inch x 6 inch x 1/2 inch steel angle		

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o. The rear cross member shall be a fully formed 3/16 " X 6" X 9" member extending full width of the body.		
p. Shall be equipped with formed 3/16-inch X 5 1/4 inch X 9 inch rear corner post.		
q. The corner post shall extend from the bottom of the rear cross member to 9 inches above the side rails.		
r. Units shall have a dump body prop to support the body in the raised position		
s. Prop shall be a double support type.		
t. When the prop is in use it shall rest against a common stop and engage the body mounted prop brackets without manual guide.		
3. <u>Tailgate, Vertical & Sloped:</u>		
a. Top of the tailgate shall be angled to prevent material build up.		
b. Upper hinge shall be flame cut from 1-inch 90,000-psi steel plate.		
c. Shall be constructed of 90,000 psi 3/16 inch steel on the inner wall and 10 gauge hi-tensile on the outer wall		
c. Upper hinge shall be flame cut from 1-inch 90,000-psi steel plate.		
e. Shall have a 6 inch offset from the centerline cross section of the tailgate, with top hinge points at the top of the rear corner posts.		
f. Shall have a hinged 3-inch D ring welded to the top center for lifting the tailgate off of the truck.		
<i>Note: Both the 5-6 and the 10-12 cu.yd. bodies shall be equipped with lifting rings to accommodate the removal of the body from the chassis. These lifting points shall be positioned to ensure level lifting of the body.</i>		
g. Tailgate hinge shall have a minimum 1/4 inch (1/8 inch each side) clearance.		
h. Lower tailgate locks shall be flame cut from 5/8 inch 90,000 psi steel plate, and designed for double acting service.		

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i. Locks shall extend a minimum of half way through the tailgate pin. Locks shall secure the tailgate pins when the tailgate is carried in the horizontal position.		
j. All tailgate hardware shall be 1-1/4 inch diameter with 1-inch wide bearing blocks and grease fittings.		
<i>Note: All tailgate hardware shall be flame cut. No casting is acceptable.</i>		
k. Tailgate latch shall be a straight air operated, utilizing an air pilot valve.		
l. The cylinder shall be mounted in the center of the dump body in a position that will allow adjustment to ensure over center locking of the tailgate latch.		
m. Shall have adjustable stops on each side of the body for over center adjustment.		
n. Shall have adequate chain to support dumping with tailgate in horizontal or inclined position.		
o. The spread control chains shall be positioned on each side of the tailgate.		
p. Tailgate shall be level with the dump body floor when in the horizontal position.		
q. No chains shall be welded to the dump body.		
r. Spreader chains shall be routed through a holder on the lower edge of the tailgate and to a chain lock on the body.		
4. <u>Cab Guard:</u>		
a. A half cab guard (24 inches) shall be made of 10-gauge 50,000-psi yield steel with 1/4-inch plate side stiffeners.		
b. The cab guard shall be welded to the front of the dump body, across the top and down the side.		
c. All welds shall be continuous wire.		
<i>Note: In some instances a body will not require a cab guard, WSDOT shall supply a frame mount cab guard / hydraulic tank combination. In this case the front end of the body shall be as high as the doghouse.</i>		

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5. <u>Hoist:</u>		
a. Shall be a standard mounted three stages, single telescopic type cylinder, large enough to lift the fully loaded body to a 48 - 52 degrees dumping angle.		
<i>Note: When lifting the body from the chassis, the hoist cylinder and saddle shall lift in conjunction with the body. (One Piece Removal).</i>		
<i>Note: Trunion mount or inverted cylinders are not acceptable.</i>		
6. <u>Lighting:</u>		
a. All lights and wiring shall be installed to FMVSS specifications and standards.		
b. All lights shall meet all applicable local, state, and federal laws and/or standards in-force at time of installation.		
c. All lights, wiring, and connections shall be weather tight utilizing weather pack connectors.		
d. Lighting and wiring requirements:		
1. Shall have one body mounted Truck-Lite Series 50 weather proof, surface mounted junction box.		
2. Shall have a sealed 7-wire conductor cable from the chassis mounted junction box to the body-mounted junction box.		
3. The stop, turn and tail lamps shall be Truck-Lite Super 40, 4-inch diameter, grommet mounted, red, sealed lamps.		
4. Shall have two stop, turn, tail lamps on each rear upper corner post of the body.		
5. Each rear corner shall be equipped with one additional light pocket to include an alternating amber flashing light in each pocket.		
6. Shall have one Truck-Lite Super 10, 2-1/2		

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inch diameter, grommet mounted, sealed red clearance lamp mounted 45 degrees in each of the lower rear dump body corner posts Lights shall be visible from the sides and rear of vehicle.		
7. Body mounted tail and sanding lights shall be flush mounted and protected by a 3/4-inch long, 1/4-inch thick wall tubing welded to the body.		
8. If any lights protrude beyond the outer edges of the corner posts, the forward surface of the protection ring will be shaped to prevent chains from being hooked while dumping.		
9. No chains or portion of the tailgate shall cover any portion of the lights or protection rings.		
10. Shall have a Truck-Lite Ultraflash heavy-duty electronic flasher wired to the amber sanding lamps so they will flash in a side-to-side alternating pattern. The wire color code shall be blue for the left lights and red for the right lights.		
11. Shall have an identification lamp assembly consisting of a mounting bracket with three Truck-Lite Super 10, 2-1/2 inch diameter red sealed lamps on 6-inch centers.		
12. All lights shall utilize a complete white wire ground system to the chassis ground terminal.		
<i>Note: No body components shall be used for grounding purposes.</i>		
7. <u>Pintle:</u>		
a. The chassis vendor supplied 7-pole trailer electrical connection shall be installed above the pintle hook and shall not interfere with the operation of the pintle hook.		
b. For 4 x 2 trucks:		
1. Pintle hook shall be a swivel type with a trailer weight of 30,000 lbs.		
2. Mounting plate shall have two sets of pintle hook installation-mounting holes at 26		

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inches and 30 inches from the ground to the drawbar eye rest.		
3. Shall have adequate bracing to ensure that the rated capacity of 30 thousand pounds can be safely towed.		
4. Glad hands, covers and safety chain rings shall be installed. Glad hands shall be at a 45-degree angle. Shall be installed in a bracket using bulkhead fittings.		
5. All tow pintle mounting fastener hardware shall be grade 8.		
6. The pintle plate positioning shall be determined at time of construction.		
<i>Note: Cutting of the frame rail flange is unacceptable.</i>		
c. For 6 x 4 trucks:		
1. Pintle hook shall be a Holland model PH 300 with air operated plunger and rated at 30 tons.		
2. Pintle hook shall be mounted with grade 8 hardware on a 3/4 in steel plate		
3. Shall have mounting holes for installation heights of 26 and 30 inches from the ground to the drawbar eye rest.		
<i>Note: Some variance in tow pintle mounting height may be allowed to facilitate the mounting (+ or - one inch) of the tow pintle bracket by adding 1 hole in the mounting plate to allow for pintle height adjustment.</i>		
4. Shall have adequate bracing to ensure that the rated capacity of 30 tons can be safely towed.		
5. Glad hands, covers and safety chain rings shall be installed. Glad hands shall be installed ahead of the pintle hook mounting cross member, and positioned at a 45 degree downward angle with access below the pintle hook cross member. Shall be installed in a bracket using bulkhead fittings.		

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6. The pintle plate mounting shall be determined at the time of construction.		
8. <u>Hydraulic Pump:</u>		
<i>Note: All hydraulic components shall be supplied by WSDOT with the exception of hoses and fittings.</i>		
a. Pump assembly shall be mounted to drive from the front crankshaft of the chassis.		
b. Pump driveline shall be installed per driveline manufacture's specification.		
9. <u>Cab Controls:</u>		
a. Shall be pedestal mounted between the seats and convenient to the operator.		
<i>Note: The console shall be mounted as close to the truck dash as possible without hindering the operation of the truck.</i>		
<i>Note: All console components and hydraulic components associated with this purchase shall be mounted in the identical position on all equipment provided by WSDOT.</i>		
b. There shall be sufficient slack in electrical wires and hydraulic lines running into console for ease of lid removal and maintenance.		
c. Power source to the console shall be wired through a constant duty solenoid that is controlled by the ignition switch		
d. Wiring diagrams shall be furnished with each unit.		
<i>Note: The bidder shall utilize and wire the in dash low hydraulic oil light located on the passenger side of the dash</i>		
10. <u>First Work Section:</u>		
a. Shall be for the sander control.		
b. The valve shall be air controlled and vented back to the truck cab.		
c. Shall have a console mounted controller and		

Specification Requirements	Check If Meets or Exceeds Spec	Fully Describe Offered Alternatives To Requirements
indicator light. "A" port shall be plumbed directly to the sander flow control.		
d. Return flow from the sander motors and sander control by-pass port shall be through a 1-inch in-line check valve to the "B" port.		
11. <u>Second Section:</u>		
Shall be used for plow angle reverse.		
12. <u>Third Section:</u>		
a. The "A" port " shall be plow power down.		
b. The "B" port shall be the "plow power up.		
13. <u>Fourth Section:</u>		
a. Shall be for the under-body hoist.		
b. The "A" port shall be hoist "power down".		
c. The "B" port shall be hoist power up.		
14. <u>Valve Bank Box:</u>		
a. Valve bank box shall be supplied by WSDOT		
b. The valve bank shall be mounted on the frame rail in a location determined at time of installation.		
<i>Note: Box mounting shall not restrict lid removal.</i>		
c. All airlines shall be numeric coded on each end and listed on a schematic showing the mounting.		
d. The valve bank shall be installed to allow the air actuators to be towards the front of the box.		
15. <u>Hydraulic Hoses:</u>		
<i>Note: The WSDOT designed hydraulic system shall be plumbed as per attached drawing.</i>		

Specification Requirements	Check If Meets or Exceeds Spec	Fully Describe Offered Alternatives To Requirements
a. All hydraulic fittings and hoses shall be weaterhead components.		
b. Pump suction line shall be 2 inches from pump to reservoir.		
c. Pump pressure line shall be 1 inch.		
d. Hoist line shall be 1 inch.		
e. Vendor shall supply hydraulic hoses, and fittings.		
f. All hoses and fittings shall be rated at 1.5 times the required working pressure.		
g. Sander pressure line shall be 3/4 inch.		
h. Sander motor pressure line shall be 1/2 inch.		
i. Sander return line shall be 3/4 inch.		
j. Plow pressure lines shall be 1/2 inch.		
k. Sander lines shall be plumbed to the sander with 1/2 inch quick disconnects		
l. Plow lines shall be plumbed to the front of the truck with 1/2-in. quick disconnects.		
<i>Note: All lines shall be flushed inside with solvent prior to installation.</i>		
<i>Note: The installer shall be held responsible for any malfunctions in the system due to contamination or poor workmanship.</i>		
<i>Note: Restrictions that cause pressure drops or back pressure are not acceptable.</i>		
m. All air lines for the operation of the valve bank and tailgate shall be 1/4 inch OD polyethylene DOT approved air brake lines		
n. Air line fittings shall be brass push-in type.		
o. An 85 lb. air protection valve shall be installed at the chassis air reservoir where the air control valve feed-line connects.		
p. All lines routed in locations where possible chaffing and wear may occur, shall have a protective covering and be adequately supported throughout the system.		
q. No pump fittings or oil lines shall be routed either over or under the frame rails forward of		

Specification Requirements	Check If Meets or Exceeds Spec	Fully Describe Offered Alternatives To Requirements
the radiator.		
<i>Note: All line installation shall conform to industry standards as relating to bending radius.</i>		
r. No lines shall be attached to, or bundled with, electrical cables or wires.		
s. Hydraulic line, non-metallic mounting blocks shall be utilized when attaching the lines to the truck frame.		
<i>Note: Plastic tie wraps shall not be used to support the lines.</i>		
<i>Note: All hydraulic lines installed on any WSDOT provided chassis should not sag below the frame rails.</i>		
 16. Oil Reservoir:		
a. Shall be supplied by WSDOT.		
b. Filter shall be mounted in the return to tank line.		
c. Shall have a ball valve between the filter and the tank.		
d. Shall have the capability to change the filter without draining the tank.		
e. A ball valve shall be installed directly on the suction outlet to isolate the oil tank while working on the hydraulic system.		
f. The return line to tank shall be 1 inch into the filter housing. From the filter housing to the ball valve shall be 1 1/4 inch line. No elbows shall be utilized at this point.		
g. All hydraulic oil shall be pre-filtered into the oil reservoir through a 10-micron filtration unit.		
<i>Note: Option pricing shall be provided for a</i>		

Specification Requirements	Check If Meets or Exceeds Spec	Fully Describe Offered Alternatives To Requirements
<i>single support rod running on top of the chassis cross members and extending from the hoist mounting plate to the chassis rear cross member. This support rod shall be utilized for running the hydraulic lines down the chassis.</i>		
17. <u>Painting:</u>		
a. All welding scale, grease, etc. shall be removed and all roughness and sharp corners shall be ground off.		
b. Body, hoist and mounting frame shall be prime coated with a minimum of 2 mils dry automotive quality two-part epoxy primer.		
c. Two coats of Dupont 7744D (paint to match cab and chassis), 3 mils dry, shall be applied to the complete outside of the dump body.		
18. <u>Plow Frame:</u>		
a. Bidder shall supply option pricing for a Monroe MC5555 or a Tenco 2-14-23-0078 Low Mount Plow Frame Assembly, to include a 4-inch diameter cylinder. Prince Cylinder # P5601		